

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

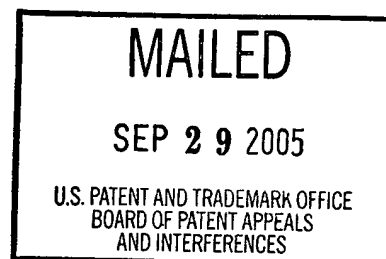
## UNITED STATES PATENT AND TRADEMARK OFFICE

### BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Ex parte ROLAND CALLENS, GEORGES BLONDEEL,  
MARC ANTEUNIS, and FRANK BECU

Appeal No. 2005-2381  
Application No. 09/944,209

ON BRIEF



Before SCHEINER, GRIMES, and GREEN, Administrative Patent Judges.

GRIMES, Administrative Patent Judge.

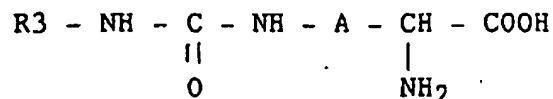
#### DECISION ON APPEAL

This appeal involves claims to diamino acid derivatives. The examiner has rejected the claims as lacking an adequate description in the specification. We have jurisdiction under 35 U.S.C. § 134. Because those skilled in the art would have recognized that Appellants were in possession of the claimed compounds, we reverse.

#### Background

The specification discloses

N<sup>ω</sup>-Carboxyalkylcarbamoyl-α,ω-diamino acids, [which are] ureins derived from an α,ω-diamino acid, of general formula



in which A represents a bivalent group consisting of a linear carbon chain formed from 4 to 8 carbon atoms, . . . and in which R<sup>3</sup>-NH represents an amino acid or a peptide. . . . R<sup>3</sup>-NH is preferably an amino acid and more preferentially an essential amino acid.

These new compounds constitute compounds with a structure similar to that of dipeptides and can be used in particular in place of the corresponding dipeptides, in particular as a source of essential amino acids in parenteral human feeding or in animal feeding.

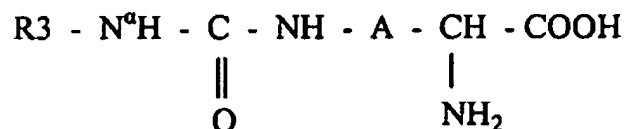
Page 8. ("Urein is understood to denote any compound whose molecular structure contains the structure -NH-CO-NH-." Page 1.)

### Discussion

Claims 7, 11, 14, 15, and 17-27 are pending. The examiner has allowed claims 11, 14, 15, and 17 and objected to claims 19-21 as dependent on a rejected base claim. The examiner has rejected claims 7, 18, and 22-27 for lack of adequate description in the specification.

Claim 7 is representative of the rejected claims and reads as follows:

7. N<sup>ω</sup>-Carboxyalkylcarbamoyl-α,ω-diamino acids of general formula



in which A represents a bivalent group consisting of a linear carbon chain formed from 4 to 8 carbon atoms, which chain is optionally substituted by one or a number of groups chosen from C<sub>1</sub> – C<sub>3</sub> alkyl groups and functional groups comprising at least one oxygen or sulphur atom and in which R<sup>3</sup>-N<sup>α</sup>H represents an α-amino acid and N<sup>α</sup> is a nitrogen atom attached to the α-carbon of the α-amino acid.

The emphasized limitation is the one that the examiner finds to lack adequate support in the specification. The examiner reasoned that "[t]he original 'R<sup>3</sup>-NH' moiety is described at page 8, lines 23-24: 'R<sup>3</sup>-NH is preferably an amino acid and more

preferentially an essential amino acid.’ In further limiting ‘amino acids,’ this passage does not support the limitation of all  $\alpha$ -amino acids. The description supports only the further limitation of ‘essential amino acids.’” Examiner’s Answer, page 3. Appellants argue that the quoted passage from the specification supports the disputed limitation, as do (among other parts) Examples 1 and 2. Appeal Brief, page 4.

The examiner

“bears the initial burden . . . of presenting a prima facie case of unpatentability.” In re Oetiker, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992). Insofar as the written description requirement is concerned, that burden is discharged by “presenting evidence or reasons why persons skilled in the art would not recognize in the disclosure a description of the invention defined by the claims.” . . . If . . . the specification contains a description of the claimed invention, albeit not in ipso verbis (in the identical words), then the examiner . . ., in order to meet the burden of proof, must provide reasons why one of ordinary skill in the art would not consider the description sufficient.

In re Alton, 76 F.3d 1168, 1175, 37 USPQ2d 1578, 1583 (Fed. Cir. 1996).

“In order to satisfy the written description requirement, the disclosure as originally filed does not have to provide in haec verba support for the claimed subject matter at issue.” Purdue Pharma L.P. v. Faulding, Inc., 230 F.3d 1320, 1323, 56 USPQ2d 1481, 1483 (Fed. Cir. 2000). Nonetheless, the disclosure must convey with reasonable clarity to those skilled in the art that the inventor was in possession of the invention. See id.

In this case, the examiner has found that the specification adequately describes the genus of compounds where R<sup>3</sup>-N<sup>α</sup>H- is an amino acid. Examiner’s Answer, page 4 (“The examiner agrees that the genus of amino acids, per se, is disclosed.”). The examiner has also found that the specification adequately describes the smaller genus of compounds where R<sup>3</sup>-N<sup>α</sup>H- is an essential amino acid. Examiner’s Answer, page 3.

See also page 4: “‘Essential amino acid’ is an art-recognized term defining a specific set of natural  $\alpha$ -amino acids.” Likewise, the examiner has found that the specification describes two species of the claimed compounds, having essential  $\alpha$ -amino acids at R3.

The examiner argues, however, that although the specification supports the broad genus of amino acids, the smaller genus of essential  $\alpha$ -amino acids, and two species of essential  $\alpha$ -amino acids, it does not support the intermediate subgenus of (essential and other)  $\alpha$ -amino acids.

The specification defines an amino acid as “any compound comprising at least one amino group and at least one carboxy group.” Page 1. An  $\alpha$ -amino acid is one in which the amino group and the carboxyl group are attached to the same carbon atom. See Kemp, page 323.<sup>1</sup> Those skilled in the art have recognized, since well before the filing date of this application, that “nearly all proteins are linear polyamides, formed by end-to-end linkage of a universal set of 20  $\alpha$ -amino acids.” Kemp, page 1001. See also Lehninger, page 96:<sup>2</sup> “All of the 20 amino acids found in proteins have as common denominators a carboxyl group and an amino group bonded to the same carbon atom [that is, they are  $\alpha$ -amino acids].”

The specification describes the R3-NH- moiety as “preferably an amino acid and more preferentially an essential amino acid.” This description, however, must be viewed in light of the immediately following disclosure that the diamino acids comprising the R3-NH- moiety “can be used in particular in place of the corresponding dipeptides,

---

<sup>1</sup> Kemp et al., Organic Chemistry, Worth Publishers, Inc. (1980), copy attached.

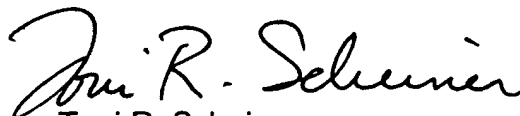
<sup>2</sup> Lehninger, Principles of Biochemistry, Worth Publishers, Inc. (1982), copy attached.

in particular as a source of essential amino acids in parenteral human feeding or in animal feeding.”

Those of skill in the art would have recognized that the only amino acids found in naturally occurring dipeptides and the only amino acids useful as a source of amino acids in human or animal feeding are  $\alpha$ -amino acids. Therefore, the specification's description of the claimed compounds as useful in place of dipeptides and as a source of essential amino acids in human or animal feeding, viewed in light of the knowledge of those skilled in the art that only  $\alpha$ -amino acids would be so useful, supports Appellants' position that the claims on appeal are adequately supported by the specification.

The examiner has not adequately explained why the specification, although not identically reciting the claimed compounds, is inadequate to show those skilled in the art that Appellants were in possession of them. We therefore reverse the rejection under 35 U.S.C. § 112, first paragraph.

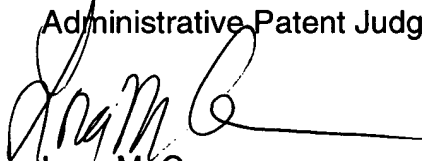
REVERSED



Toni R. Scheiner  
Administrative Patent Judge



Eric Grimes  
Administrative Patent Judge



Lora M. Green  
Administrative Patent Judge

)  
)  
)  
)  
) BOARD OF PATENT  
)  
) APPEALS AND  
)  
) INTERFERENCES  
)  
)

Appeal No. 2005-2381  
Application No. 09/944,209

Page 6

Connolly Bove Lodge & Hutz  
P.O. Box 2207  
Wilmington, DE 19899